

EXHIBIT 37

Redacted Excerpts of First
Deposition of Dr. Hal Singer
(Singer Dep. I)

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEVADA

- - -

IN RE: : Civil Action
: DOCKET NO.
CUNG LE, NATHAN QUARRY, : 2:15-cv-01045-RFB-
JON FITCH, BRANDON VERA, : (PAL)
LUIS JAVIER VAZQUEZ and :
KYLE KINGSBURG, on behalf : CLASS ACTION
of themselves and all :
others similarly :
situated, :
:
Plaintiffs, :
:
v. :
:
ZUFFA, LLC, d/b/a :
ULTIMATE FIGHTING :
CHAMPIONSHIP and UFC, :
:
Defendants. :

- - -

Wednesday, September 27, 2017

- - -

Videotaped deposition of
HAL J. SINGER, Ph.D., taken pursuant to
notice, was held at the law offices of
Berger & Montague, P.C., 1622 Locust
Street, Philadelphia, Pennsylvania 19103,
beginning at 9:24 AM, on the above date,
before Constance S. Kent, a Certified
Court Reporter, Registered Professional
Reporter, Certified LiveNote Reporter, and
Notary Public in and for the Commonwealth
of Pennsylvania.

* * *

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1 THE WITNESS: I can't think
2 of others.

3 BY MR. ISAACSON:

4 Q. All right. Now, you do
5 define markets in your report at a high
6 level. Let me see if I've got what
7 you've got.

8 For input markets, you've
9 defined a tracked market by referring to
10 data from FightMetric -- FightMetrics
11 (sic) right?

12 A. I certainly use FightMetrics
13 (sic), but I prefer to say that I have --
14 I have a relevant input market and a
15 relevant input submarket, and I use two
16 different standard industry databases to
17 identify the fighters in the relevant
18 input market.

19 Q. Right.

20 A. One is FightMetric, the
21 other one is Fight Matrix. I'm very
22 upset about those names, but that's --

23 Q. Right, they're not helpful
24 to us.

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1 A. They're not helpful.

2 Q. But we'll live with them.

3 But -- so you have two
4 relevant input markets: A tracked market
5 which -- for which you draw data from
6 FightMetric, and a ranked market which
7 draws from data from Fight Matrix,
8 together with the data from FightMetric.

9 Do I have that right?

10 A. Again, I would prefer to say
11 there's one relevant input market that
12 we're -- that we're trying to measure and
13 I have two different ways of measuring
14 it. One relies on a database from
15 FightMetrics (sic), which I refer to as
16 the tracked method. That's -- that's
17 really the beginning, because as you
18 probably are aware, there's a few
19 additions that I tack on to -- to even
20 that measure.

21 And then as we move from the
22 tracked measure to the ranked measure,
23 I -- I include everybody who made it into
24 the tracked and I add on additional

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1 fighters who were ranked, but not
2 tracked, as well as one other MMA
3 organization.

4 Q. So those are two -- do I
5 understand it right, those are two
6 different relevant input markets that
7 you -- that you have defined?

8 A. This -- this could be a
9 matter of semantics, but I prefer to say
10 there's one relevant input market and
11 these are two different ways to measure
12 it.

13 Q. What is the one relevant
14 input market?

15 A. It's -- I think I've defined
16 it in the report.

17 Q. Feel free to point me in the
18 report.

19 A. Okay.

20 Q. If it helps you, the
21 relevant input market discussion is on
22 page 66.

23 A. Well, if we're going to call
24 it anything by shorthand, I would prefer

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1 to use the term relevant input market. I
2 think that the language in the report
3 explains what I'm trying to get at, which
4 is a set of fighters with MMA fighter
5 services that would be used by an MMA
6 promotion organization to stage live
7 events.

8 Q. You told me you preferred to
9 say there's one relevant input market and
10 there's two different ways to measure it.

11 What is the one relevant
12 input market?

13 MR. CRAMER: Asked and
14 answered.

15 THE WITNESS: These are --
16 these are MMA fighters who are
17 used as input to the production of
18 live MMA events.

19 And to clarify it, I said
20 two. Of course there's a --
21 there's a third -- a submarket. I
22 don't know if --

23 BY MR. ISAACSON:

24 Q. Yeah, we'll get to the

Page 54	Page 56
<p>1 submarket.</p> <p>2 A. Okay.</p> <p>3 Q. The -- all right. And the</p> <p>4 submarket is the -- you used the</p> <p>5 headliner definition; is that right?</p> <p>6 A. Correct.</p> <p>7 Q. And am I correct that in</p> <p>8 your opinion, there would be no broader</p> <p>9 market than the markets you have defined</p> <p>10 using the tracked measure or the ranked</p> <p>11 measure?</p> <p>12 A. Correct, there's no broader</p> <p>13 market. Already I think that the ranked</p> <p>14 market is -- is potentially overly broad.</p> <p>15 Q. And when you -- when you say</p> <p>16 there's no broader market, that would</p> <p>17 mean there's no reasonable substitutes</p> <p>18 outside those markets if, for example,</p> <p>19 fighter pay where to go up?</p> <p>20 A. That's not quite what I</p> <p>21 mean.</p> <p>22 Q. Well, let me ask you this.</p> <p>23 Then let me just ask you this question:</p> <p>24 In your opinion, are there no reasonable</p>	<p>1 SSNIP analysis, which is S-S-N-I-P.</p> <p>2 But just returning to my</p> <p>3 question, in your opinion, are there no</p> <p>4 reasonable substitutes outside the</p> <p>5 tracked market and the ranked market if</p> <p>6 fighter pay goes up?</p> <p>7 A. So that -- you haven't</p> <p>8 posited the correct question for market</p> <p>9 definition. It's not if fighter pay goes</p> <p>10 up. It's -- the question is if -- if</p> <p>11 Zuffa were to control a certain set of</p> <p>12 fighters, could -- could Zuffa exercise</p> <p>13 market power in the form of pushing wages</p> <p>14 down? You keep saying if prices go up.</p> <p>15 That's not the -- that's not market --</p> <p>16 Q. I appreciate you telling me</p> <p>17 I'm not asking the correct questions --</p> <p>18 A. Well, I mean --</p> <p>19 Q. But let's stick with --</p> <p>20 let's stick with answering my questions.</p> <p>21 A. Okay. Well, okay, but if</p> <p>22 you ask me a question that makes no sense</p> <p>23 as a matter of economics, I can't give</p> <p>24 you an answer.</p>
Page 55	Page 57
<p>1 out -- substitutes outside the tracked</p> <p>2 market and the ranked market if fighter</p> <p>3 pay rises?</p> <p>4 MR. CRAMER: From what level</p> <p>5 to what level?</p> <p>6 MR. ISAACSON: It goes up.</p> <p>7 MR. CRAMER: Okay.</p> <p>8 THE WITNESS: So I do</p> <p>9 allow -- before I answer the</p> <p>10 question, I just want to make sure</p> <p>11 you understand how I get to the</p> <p>12 market. It's not entirely driven</p> <p>13 by reasonable substitutes. I'm</p> <p>14 asking -- I'm trying to employ the</p> <p>15 SSNIP test from the merger</p> <p>16 guidelines, and I'm looking for</p> <p>17 the smallest set of fighters such</p> <p>18 that a hypothetical monopsonist</p> <p>19 could exercise market power.</p> <p>20 And that -- that is the</p> <p>21 question that -- that drives the</p> <p>22 analysis.</p> <p>23 BY MR. ISAACSON:</p> <p>24 Q. And I'll ask you about your</p>	<p>1 Q. In your opinion -- in your</p> <p>2 opinion, are there no reasonable</p> <p>3 substitutes for the fighters outside the</p> <p>4 tracked market and outside the ranked</p> <p>5 market?</p> <p>6 A. I would put the caveat that</p> <p>7 if a hypothetical monopsonist controlled</p> <p>8 all of the fighters in either of those</p> <p>9 two markets, it would be able to</p> <p>10 successfully exercise a wage suppression</p> <p>11 below competitive levels without having</p> <p>12 to fear that a sufficient number of</p> <p>13 fighters inside of its net would -- would</p> <p>14 substitute to something outside of the</p> <p>15 net.</p> <p>16 And that's a long way of</p> <p>17 answering your question, but I think</p> <p>18 doing so more precisely as to what is</p> <p>19 considered reasonable.</p> <p>20 If you -- if you have, say,</p> <p>21 all of the ranked fighters, and you're</p> <p>22 looking at it from the perspective of a</p> <p>23 given ranked fighter, let's suppose a</p> <p>24 highly ranked fighter, he or she will not</p>

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1 find it reasonable to go to an
2 organization that cannot afford him or
3 her any quality opponents to fight. If
4 you can't fight a highly-ranked opponent,
5 you have no chance of moving up the
6 rankings.

7 And so I'm answering a
8 related question, which I think is the
9 more important question. And I'll leave
10 it at that.

11 Q. Okay. So in general it's
12 going to help me today if you answer my
13 questions and not the related questions
14 you think are more important. You'll
15 have the opportunity to do the related
16 questions you think are more important
17 with your counsel, but I'm under time
18 limits.

19 And I understand you gave an
20 explanation, but was the answer to my
21 question, yes, that in your opinion there
22 are no reasonable substitutes for the
23 fighters outside of the tracked market
24 and outside the ranked market?

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1 MR. CRAMER: Objection to
2 form.

3 THE WITNESS: I'm saying for
4 certain fighters inside of that
5 category or class, depending on
6 how you define the market, there
7 might be what that one fighter
8 considers to be a reasonable
9 substitute, but that doesn't end
10 the inquiry.

11 The question is would there
12 be a sufficient number of fighters
13 inside of that definition such
14 that a hypothetical monopsonist
15 trying to exercise market power
16 would be -- would be defeated in
17 the sense that it would suffer a
18 profit loss by trying to push
19 wages below competitive wages.

20 One fighter within the set
21 finding an outlet to be
22 reasonable, right, doesn't cut it.

23 BY MR. ISAACSON:

24 Q. The -- okay. I think I

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1 understand. So what I -- if I understand
2 what you're saying is, in your opinion,
3 there's not a sufficient number of
4 reasonable substitutes of fighters
5 outside the tracked markets and outside
6 the ranked market to affect your market
7 definition?

8 A. I wouldn't put it that way.

9 Q. I understand you were
10 saying -- before I said there are no
11 reasonable substitutes and you're saying
12 one doesn't matter. The -- so tell me
13 how you would put it.

14 A. There would have to be
15 enough fighters in your -- in your
16 defined set that would consider these
17 outside options reasonable so as to
18 defeat the wage decrease -- so as to
19 render the wage decrease unprofitable.

20 Q. Okay. All right. So just
21 to sum it up, in your opinion, there's
22 not a sufficient number of reasonable
23 substitutes of fighters outside the
24 tracked market or outside the ranked

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1 market to defeat a wage decrease if that
2 were to happen?

3 A. I'd like to put it back in
4 my own words, that once you've defined
5 the set as I've done it, there wouldn't
6 be sufficient defection or substitution
7 away to forums or venues outside of the
8 definition by fighters inside of the
9 market so as to render this hypothetical
10 wage decrease unprofitable.

11 Q. Right. Okay. Now, is it --
12 would it be the case that, in general,
13 fighters outside of the ranked and
14 tracked markets would not be affected by
15 wage increases within those markets?

16 MR. CRAMER: Form.

17 THE WITNESS: That is --
18 that is outside I believe of the
19 scope of anything that -- that
20 I've studied. I'd have to think
21 about it. But it's unrelated to
22 what I think the relevant question
23 is for determining the relevant
24 product market -- the relevant

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1 Q. All right. Let me try it
2 this way then. Can you identify any
3 peer-reviewed literature looking at
4 labor's share of revenues as the variable
5 of interest in determining
6 anticompetitive impact?

7 MR. CRAMER: Form. Asked
8 and answered.

9 THE WITNESS: I don't know
10 if I'm -- if I'm going to be able
11 to call up names of particular
12 articles off the top of my head,
13 but I can tell you that -- that
14 the wage share of marginal revenue
15 product is the way that you
16 understand competition in
17 competitive labor markets and how
18 you understand the opposite.

19 BY MR. ISAACSON:

20 Q. All right. The -- and I
21 think -- and I'll come to that subject
22 right now, but right now you can't tell
23 me any peer-reviewed literature that
24 looked -- that analyzes anticompetitive

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1 impact by looking at labor share of
2 revenues; is that right?

3 MR. CRAMER: Asked and
4 answered.

5 THE WITNESS: I believe I've
6 cited some in my report, but
7 sitting here I can't -- I can't
8 tell you a particular article.

9 BY MR. ISAACSON:

10 Q. All right. If you look at
11 page 120 of your report, footnote 454?

12 A. Yes.

13 Q. You talk about elementary
14 economics which shows that competitive
15 firms paid labor a share of revenue
16 commensurate with labor's productivity
17 based on a marginal product to labor.

18 That's the principle that
19 you were just discussing with me?

20 A. Yes.

21 Q. Is that right?

22 And -- now the marginal
23 revenue product labor is the value of the
24 additional output created when a firm

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1 adds a worker, am I correct?

2 A. I think that's a fair -- a
3 fair concept.

4 Q. And is it -- is it correct
5 that standard economics would predict
6 that a worker's compensation would be
7 equal to that marginal revenue product of
8 labor?

9 A. In a competitive
10 environment, the labor's share of his or
11 her marginal revenue product tends
12 towards higher values, and the limit
13 would -- would approach his or her
14 marginal revenue product.

15 Q. And in a competitive
16 environment, standard economics would say
17 that the -- actually, let me start over.

18 When you expressed that
19 marginal revenue product is labor or
20 wages, do you ordinarily do that in
21 dollar terms or in a fraction of the
22 firm's revenue?

23 MR. CRAMER: Objection to
24 form.

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1 THE WITNESS: Do I
2 ordinarily do it? I'm sorry, I'm
3 just not following.

4 BY MR. ISAACSON:

5 Q. How about in standard
6 economics?

7 MR. CRAMER: Same objection.

8 THE WITNESS: I think that
9 in standard economics you would
10 put the wage in the numerator and
11 you'd put the marginal revenue
12 product in the denominator.

13 BY MR. ISAACSON:

14 Q. And the marginal revenue
15 product would be expressed as a dollar
16 value?

17 A. Yes.

18 Q. And do economists ordinarily
19 measure the productivity of the
20 additional output -- well, let me put it
21 differently.

22 Do economists generally
23 measure the productivity created when a
24 firm adds a worker in dollar terms as

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1 opposed to as a percentage of revenue?

2 MR. CRAMER: Objection to
3 form, to generally. For what
4 purpose?

5 THE WITNESS: A firm could,
6 if a firm bills -- if a law firm
7 bills an associate out at \$400 an
8 hour, it could express what the --
9 what the young lawyer's salary on
10 an hourly basis is as a -- under
11 an assumed utilization rate as a
12 percentage of that young lawyer's
13 bill rate.

14 BY MR. ISAACSON:

15 Q. And are you aware of any
16 studies which express the marginal
17 revenue product of labor in terms of the
18 percentage of revenue of the firm?

19 A. I'm not aware, but as you've
20 expressed it, that's not quite what I'm
21 doing either.

22 Q. Now, in terms of -- did you
23 make any effort to measure the marginal
24 revenue product of labor of UFC fighters?

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1 A. Yes.

2 Q. Okay. And what would you
3 point to me for that?

4 A. What I did, which is I -- I
5 calculated the average revenue per event,
6 per fighter, and I'm using that as a
7 proxy for the marginal revenue product.

8 Q. All right. If the
9 average -- when you look at the average
10 revenue per event, per fighter, how do
11 you determine what part of that revenue
12 is the contribution of the fighter as
13 opposed to, for example, marketing,
14 promotions, production or the work of the
15 overall firm?

16 A. So for my purposes, I don't
17 need to figure out that -- that
18 decomposition. I will note, however,
19 that I cite a study in my literature
20 review section that suggests that the
21 fighter is responsible for, if not all,
22 the vast majority of -- of the
23 pay-per-view revenues that are captured
24 and not the brand.

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1 Q. Well, I didn't ask about the
2 brand.

3 The -- you would agree --
4 you would agree with me that effective
5 marketing and promotion could increase
6 the average revenue per event, correct?

7 A. Yes.

8 Q. And you would agree with me
9 that super- -- improving television
10 production can increase the average
11 revenue per event?

12 MR. CRAMER: All things
13 equal?

14 MR. ISAACSON: Yes.

15 THE WITNESS: I'm not sure
16 what -- what you mean by improving
17 television production.

18 BY MR. ISAACSON:

19 Q. A better production that
20 people enjoy more.

21 MR. CRAMER: Objection to
22 form.

23 THE WITNESS: And you're
24 asking me if I can conceive of

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1 this as a matter of theory?

2 BY MR. ISAACSON:

3 Q. Yes.

4 A. As opposed to whether it
5 actually happened?

6 Q. Yes.

7 A. I think I'm -- I'm going to
8 grant you that as a matter of theory one
9 could -- one could add value by
10 increasing the quality of the production.

11 Q. Okay. Now, in this case,
12 you did not do an actual study yourself
13 of the contribution of the UFC fighters
14 to the average revenue per event; is that
15 right?

16 MR. CRAMER: Asked and
17 answered.

18 THE WITNESS: I think that's
19 correct. As I noted a few moments
20 ago, that was not necessary for my
21 purposes.

22 BY MR. ISAACSON:

23 Q. By using the average revenue
24 per event, per fighter as a proxy, were

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1 you using that as a proxy for the
2 marginal revenue product of that labor?

3 A. Yes.

4 Q. Okay. And you were assuming
5 that all of that average revenue per
6 event, per fighter was the product of
7 that labor as opposed to some other
8 source?

9 MR. CRAMER: Form.

10 THE WITNESS: No, I don't
11 think I'm assuming that.

12 BY MR. ISAACSON:

13 Q. When -- when you look at
14 average revenue -- I'm sorry. When you
15 ordinarily look at the marginal revenue
16 product of labor, do you talk about
17 everybody who works in the firm including
18 management?

19 MR. CRAMER: Objection to
20 form.

21 THE WITNESS: If -- if this
22 were some other case and you were
23 interested in computing the
24 marginal revenue product of

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1 management, you might -- you might
2 be interested in that. But that
3 wasn't what I was trying to do
4 here.

5 BY MR. ISAACSON:

6 Q. All right. Here, have you
7 attempted to actually estimate the
8 marginal revenue product of the fighter
9 portion of the labor force of the UFC?

10 MR. CRAMER: Objection to
11 form.

12 THE WITNESS: I think you're
13 getting at the same question now,
14 just asked in a different way
15 which is have I done a
16 decomposition of the marginal
17 revenue product between the
18 fighters and -- and Zuffa, and the
19 answer is no, I have not done that
20 decomposition.

21 BY MR. ISAACSON:

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1
2
3
4
5 Q. You, yourself, have not
6 looked at the levels of pay over time
7 paid to Zuffa's fighters other than
8 looking at this study?

9 MR. CRAMER: Objection to
10 form.

11 THE WITNESS: So I wouldn't
12 put it that way.

13 BY MR. ISAACSON:

14 Q. How would you put it?

15 A. I am absolutely looking at
16 their pay over time in the sense that I'm
17 recording their pay as the numerator of
18 my dependent variable. So to suggest
19 that I'm not looking at their -- their
pay is erroneous.

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1 Q. And one way is restricting
2 the amount of labor hired and the other
3 is restricting the compensation paid to
4 labor?

5 A. Correct.

6 Q. And a traditional economy
7 theory of monopsony would restrict the
8 amount of labor hired, do I have that
9 correct?

10 A. Well, here the way that it
11 manifests itself is -- is a bit different
12 but -- because I'm, of course, thinking
13 of the shelving, but in other
14 applications, you can think about not
15 merely hiring, a monopsonist, all things
16 equal, generates less output and less
17 inputs than -- than does a competitive
18 firm.

19 I think as it's applied
20 here, the way that the suppression of
21 fights and output occurred was -- was in
22 part due to the shelving of fighters. So
23 fighters were being hired, but not
24 necessarily deployed.

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1 Q. All right. Now, you were
2 telling me how that was applied here, but
3 am I correct that in traditional economic
4 therapy, a monopsony restricts the amount
5 of labor that's hired?

6 A. Yes.

7 Q. Now, we've been talking
8 about --

9 A. I would amend hired or
10 deployed.

11 Q. The -- we've been talking
12 about labor share or fighter share. You
13 mentioned weighting by revenue before.
14 Let's come back -- let's go to that topic
15 now.

16 If we look at paragraph 128
17 of your report.

18 A. Oh, did you want page 128 or
19 paragraph 128?

20 Q. Paragraph 128.

21 A. Give me one second.

22 Q. Page 87.

23 A. Okay. Paragraph 128.

24 Q. Yes. Then there's a Figure

8 Q. How do I -- with the
9 understanding that you've said that
10 marginal revenue product of labor is the
11 value of the additional output created
12 when the firm adds a worker, how do I
13 know how much increased percentage of
14 revenue should be paid to a worker based
15 on the marginal revenue product of their
16 labor?

17 A. I don't think I understand
18 that question.

19 Q. Okay. Looking at 450 --
20 that footnote 454, you say firms that
21 wield monopsony power pay a smaller share
22 of revenue of labor and they do that in
23 two ways, right?

24 A. Yes.

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1 what you're asking me to assume is
2 to assume there are no artificial
3 restrictions. I -- I don't know.
4 I'm trying -- when you say stand
5 alone, you need to give me more
6 context.

7 BY MR. ISAACSON:

8 Q. That would be fine. Go
9 ahead and assume there are no artificial
10 barriers to entry, there would remain the
11 natural barriers to entry that you've
12 identified, do you consider those to be
13 high barriers to entry?

14 A. I consider them to be
15 economically significant in the sense
16 that it might be hard for you or I to
17 enter tomorrow in a timely and seamless
18 way. But I think that a person like Mark
19 Cuban with access to capital and
20 experience in television and having his
21 own TV channel, there -- could likely
22 overcome the natural barriers.

23 Q. The Strikeforce and Bellator
24 benchmarks, we talked about those this

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1 morning for purposes of damages.

2 A. Yes.

3 Q. I'm going to return to that
4 topic.

5 In those benchmarks, you are
6 using two competitors of -- of Zuffa
7 comparing the percentage of their
8 revenues paid to labor or paid to the
9 fighters to that of Zuffa. I think we've
10 established that, correct?

11 A. Correct.

12 Q. Okay. Why in economic
13 theory would you use the percentage of
14 revenue paid to labor by a competitor as
15 a benchmark?

16 A. Because this is a voluntary
17 transaction between a willing buyer and a
18 willing seller as to the appropriate wage
19 in the -- in the MMA industry. And so I
20 think if we're looking for -- for
21 reasonable comparables that exist within
22 the same relevant market, this is the
23 logical place to start looking.

24 Q. When you use the term

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1 appropriate wage.

2 A. Yes.

3 Q. Are the Bellator -- is
4 Bellator paying the fighters higher
5 average wages than the UFC?

6 A. I'd say it depends on which
7 fighter you're talking about, but --

8 Q. I said average.

9 A. Yeah, the weight -- sorry.

10 MR. CRAMER: I was going to
11 say you mean today, Bellator?

12 MR. ISAACSON: At any time.

13 THE WITNESS: [REDACTED]

14 [REDACTED]
15 [REDACTED]
16 [REDACTED]
17 [REDACTED]
18 BY MR. ISAACSON:

19 Q. So why, in economic theory,
20 would you use the percentage of revenues
21 that a competitor allocates to the labor
22 as a benchmark as opposed to the -- the
23 actual appropriate wage that they decided
24 to pay?

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1 [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED]
5 [REDACTED]
6 [REDACTED]
7 [REDACTED]
8 [REDACTED]
9 [REDACTED]

10 Now, imagine a but-for world
11 in which you strip out the exclusionary
12 contracts and Strikeforce and Bellator
13 and others are able to evolve into
14 legitimate and viable contenders for this
15 market, what would likely happen is that
16 their output would expand, their revenues
17 would expand and now [REDACTED]

18 [REDACTED] would start
19 to draw fighters away from UFC and
20 towards those rivals.

21 And now the question is what
22 does Zuffa have to do in this -- in this
23 but-for world? Is Zuffa able to stay on
24 its [REDACTED] when were all of its

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1 rivals are drawing the fighters away at
2 [REDACTED]? No. They'd have
3 to -- they'd have to come up. And the
4 question is where would they come up to.
5 And I think a very reasonable estimate of
6 where they would -- where they would come
7 up to in a competitive market are the
8 actual numbers that -- that its rivals
9 are offering.

10 Q. Are there competitive
11 markets where different firms pay very
12 different percentages of their revenues
13 to laborers?

14 A. It's possible.

15 Q. Is there any reason to
16 believe in a competitive market that
17 firms would not make different decisions
18 about what percentage of revenues to pay
19 to labor as long as they were all paying
20 what they thought was the appropriate
21 wage?

22 MR. CRAMER: Objection to
23 form.

24 THE WITNESS: Let me hear it

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1 back?

2 (Pertinent portion of the
3 record is read.)

4 MR. CRAMER: Form.

5 THE WITNESS: In a
6 competitive market appropriately,
7 what you and I think is
8 appropriate may not matter, right?
9 If you start to lose your
10 employees because your rivals are
11 offering a higher wage share than
12 what you thought was appropriate,
13 may no longer be appropriate for
14 retaining your -- your labor
15 force.

16 BY MR. ISAACSON:

17 Q. Right. So I was trying to
18 echo your words. You told me that you
19 thought it was appropriate to look at
20 Strikeforce and Bellator because this was
21 a voluntary transaction between a willing
22 buyer and willing seller as to the
23 appropriate wage in the MMA industry.

24 Is there any reason to

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1 believe in a competitive market the firms
2 would not make different decisions about
3 what percentages of revenues to pay?

4 MR. CRAMER: Same objection,
5 form.

6 BY MR. ISAACSON:

7 Q. Pay to labor.

8 A. I think that in a
9 competitive market I can -- I could be
10 sufficiently open minded to -- to
11 contemplate small differences in wage
12 shares that -- that are paid by different
13 firms.

14 What I -- what I can't
15 accept is the notion that one firm would
16 be able to pay -- in a competitive
17 market, one firm would be able to pay

18 [REDACTED].
19 [REDACTED]
20 Q. Right.

21 A. That equilibrium is not
22 sustainable in a competitive market.

23 Q. And are you aware of any
24 economic literature or studies that have

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1 looked at the issue of the relative --
2 comparisons of the percentages of revenue
3 paid to labor in competitive markets?

4 A. I'm invoking economic theory
5 here, so I'm not prepared to tell you a
6 particular study that captures that
7 particular effect.

8 Q. Right. Do you know for a
9 fact whether there are -- whether or not
10 there are industries where one company
11 decides to allocate [REDACTED] its --
12 let's start this over.

13 I don't know, in fact,
14 whether there are competitive markets
15 where one company decides to allocate
16 [REDACTED] of its revenues to labor and
17 another decides to allocate [REDACTED]
18 and then they compete?

19 A. I can't tell you examples of
20 those, and I think -- I think it would
21 be -- it would be an unlikely equilibrium
22 in a competitive market. I mean, I
23 imagine a world in which Boies Schiller
24 tries to pay its associates who bill at

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1 \$400 an hour, 5 percent of their bill
2 rate, and Covington is paying 20 percent.
3 It would be very hard for Boies Schiller
4 to retain its staff under those
5 conditions.

6 Q. Assuming both firms are of
7 approximately equal size?

8 A. In a competitive market,
9 correct.

10 Q. And have you previously in
11 estimating damages or -- or anti-
12 competitive effect ever looked to a
13 benchmark of the percentage of revenues
14 paid by a competitor to labor?

15 A. Yes, I have.

16 Q. And what was that?

17 A. That would be the Arizona
18 travel case -- Arizona travel nurse case.

19 Q. And tell me the competitive
20 firms you looked at in terms of
21 percentage of revenue and the benchmark
22 you used?

23 A. I used neighboring states
24 that were not subject to the conspiracy,

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1 allegedly subject to the conspiracy as a
2 benchmark for the competitive rate of
3 the -- portion of the bill rate that
4 flowed through to the -- to the travel
5 nurses.

6 But I do benchmarking
7 analyses for fair market value studies in
8 many applications. I'm thinking about my
9 work for the Baltimore Orioles and trying
10 to figure out fair market value of the
11 rights fees for the Nationals. We fight
12 like cats over this, and we're always
13 looking for comparables, and what we want
14 to do is go out and find a recent
15 transaction between a willing buyer and a
16 willing seller and we want to control for
17 the size of the market.

18 Q. I'm not --

19 A. Let me just finish.

20 One expert might say let's
21 use Los Angeles as the -- as the --
22 hypothetically as the proper benchmark
23 for what the Nationals should be paid by
24 the television network, and we fight out

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1 about, well, don't you need to control
2 for the fact that the revenues in the
3 population of Los Angeles are this much
4 bigger than Washington.

5 So this notion of going out
6 and looking for comparables and
7 correcting for market size or revenue is
8 a very common occurrence in my business.

9 Q. I understand you've used
10 benchmarks before. I'm being much more
11 specific just in terms of the benchmark
12 of a competitor. Now, when you looked --
13 when you looked at other states in
14 Arizona, you weren't looking at
15 competitors within the state, right?

16 A. No, we were.

17 Q. Okay.

18 A. We were, right, because
19 those were hospitals that were not-- no,
20 but this is important. These were
21 hospitals that were not subject to the
22 conspiracy. The conspiracy was alleged
23 to have only occurred in Arizona.

24 So when we look at the

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1 neighboring southwestern states, we're
2 finding a comparable, we're finding a
3 firm that is not -- that is paying what
4 we think is the competitive share of
5 the -- of the bill rate to the nurses.

6 Q. My question is just simply:
7 You were saying you looked at competitive
8 hospitals outside of state -- outside the
9 state?

10 A. Correct.

11 Q. Okay. And the -- and what
12 was the number of firms outside of the
13 state that you looked at to get that
14 percentage of, I think, billing?

15 A. We got -- we got state level
16 aggregates and we used the state level
17 aggregates as our benchmark.

18 Q. So would the state level
19 aggregates consist of all the hospitals
20 in the neighboring states?

21 A. Correct.

22 Q. So it's quite a number of --
23 of firms that you were going the
24 comparison to?

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1 transportation of those at any point. I
2 understand that's a separate issue.

3 A. Okay.

4 Q. Okay? But in terms of the
5 use of identity in Fight Pass clips, in
6 posters, in television clips, all right,
7 are those acts that tend to foreclose
8 competition as opposed to being possibly
9 acts that are the result of restrictions
10 on competition?

11 A. I don't think I take an
12 opinion on -- on the use of the fighter's
13 rights in a -- in a video clip as being
14 anticompetitive. I don't think I offer
15 that opinion.

16 MR. ISAACSON: Okay. Now
17 we'll take a break.

18 THE VIDEOGRAPHER: The time
19 is 3:19 PM. We are going off the
20 record.

21 (Recess.)

22 THE VIDEOGRAPHER: The time
23 is 3:31 PM. We are back on the
24 record.

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1 BY MR. ISAACSON:

2 Q. The Table 6, which shows
3 results of your foreclosure regression,
4 125 and 126.

5 A. Okay.

6 Q. 126 has a line towards the
7 bottom, "Fighter Fixed Effects?" Right
8 above observation.

9 A. Yes.

10 Q. Now, am I right that for
11 fighter fixed effects, you use a dummy
12 variable for each fighter?

13 A. Correct.

14 Q. And there are a list of
15 fixed effects in the notes, gender, win
16 method, weight class, card placement,
17 bout number, promoter, year, country and
18 venue. Were there individual dummies for
19 each one of those fixed effects?

20 A. No. So a fixed effect like
21 gender doesn't require individualized
22 variables, right? In contrast, fighter
23 fixed effects does -- does vary -- does
24 require an individual dummy for each

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1 fighter.

2 Q. All right. So it -- so it
3 was one -- fighter fixed effects was one
4 dummy variable for each fighter?

5 A. Correct.

6 Q. And was that a variable you
7 turned on and off?

8 A. Well, this is code in statu
9 where you can say that on the next time
10 you run this regression, I want you to --
11 to control for the identity of the
12 fighter. So every time you see an
13 observation where John is present, let
14 that dummy turn on, and that causes the
15 regression to do different things. And
16 that is a different dummy than, say, a
17 gender dummy or a weight class dummy,
18 which -- which would be defined
19 differently.

20 Q. Right. So would the -- you
21 had one dummy for fighter fixed effects,
22 was that turned on for each fighter then?

23 A. Just to make things simple,
24 imagine that you have 100 unique fighters

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1 in your dataset.

2 Q. Yes.

3 A. If you were going to do this
4 mechanically -- you don't have to do, by
5 the way, it's programmed into the -- into
6 the code.

7 Q. I understand.

8 A. It's a known command. You
9 can just say, this time run the
10 regression with fixed effects.

11 But mechanically, if you
12 wanted to do it by hand, you could create
13 a John Doe dummy such that every time
14 John Doe was fighting, the dummy turned
15 on, and then in the next column over, you
16 make a Jane Smith dummy, and the dummy
17 would turn on to 1 every time Jane
18 appeared.

19 You have to omit -- you have
20 to omit one fighter when you do this.
21 You know, if there are 100, you make 99
22 dummies.

23 Q. So just so -- I understand
24 this is a computer command even though

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<p>1 I'm using manual language, but was the 2 dummy variable for fighter fixed effects 3 turned on for each fighter? 4 A. I wouldn't put it that way. 5 When you use a fighter fixed effects, 6 imagine we are -- with 100 unique 7 fighters, we're going to add now 100 or 8 99 new columns in Microsoft Excel. 9 Right? And the first column is going to 10 be the John Doe dummy, it's a new 11 variable, and it's set to zero for -- for 12 every observation except for when John 13 Doe is fighting. Right? 14 And then the Jane Smith 15 being the second fixed effect dummy is 16 set to zero for every time you see an 17 observational database, it will show up 18 as one when Jane Smith is fighting. 19 So that's what -- that's 20 what the fighter fixed effect is. 21 Q. Okay. Let's talk about 22 market definition. 23 We discussed before the 24 three -- the two input markets and the</p>	<p>1 practices suggested by the merger 2 guidelines. 3 I -- as you know, I also do 4 a direct approach to establishing 5 market power. 6 I -- I think that we get can 7 into the details of how I came to 8 those decisions, but I think that 9 it obeyed by the -- by the 10 standards of the merger 11 guidelines. 12 BY MR. ISAACSON: 13 Q. So I asked you -- I 14 wasn't -- I'm not sure whether you're -- 15 if that's a qualified yes or a yes. So 16 let me try it this way. Were the methods 17 that you used to define input markets 18 sufficient to define those markets under 19 the standards of the merger guidelines? 20 MR. CRAMER: Objection to 21 form. 22 THE WITNESS: I don't know 23 what sufficient means in that 24 context, but I am ready to testify</p>
Page 279	Page 281
<p>1 one submarket that you defined. Now, for 2 each of those input markets, in your 3 view, did you do a merger guidelines 4 analysis to define those markets? 5 MR. CRAMER: Objection to 6 form. 7 THE WITNESS: I testified 8 earlier that -- that I had the 9 SSNIP test from the merger 10 guidelines in my head as I was 11 trying about how to construct the 12 relevant input markets. 13 BY MR. ISAACSON: 14 Q. All right. Well, was the -- 15 were the methods that you used to define 16 the input markets sufficient, in your 17 mind, for a complete merger guidelines 18 analysis? 19 MR. CRAMER: Objection to 20 form. Objection to the extent it 21 calls for a legal conclusion. 22 THE WITNESS: I think that 23 I -- and my methods were 24 consistent with the standards and</p>	<p>1 that they're consistent with the 2 standards articulated in the 3 guidelines. 4 BY MR. ISAACSON: 5 Q. Consistent with is -- is not 6 helping me because I don't know what that 7 means. The -- are you able to tell me 8 today whether the input markets you 9 defined were sufficiently defined 10 according to the guidelines of the -- 11 according to the merger guidelines? 12 MR. CRAMER: Objection to 13 the form, asked and answered. 14 THE WITNESS: I just don't 15 know what sufficient means in that 16 context. 17 BY MR. ISAACSON: 18 Q. Would you have the same 19 answer for the output markets that you 20 defined? 21 A. Yes. 22 Q. So with respect to the input 23 markets and the output markets you have 24 defined in your report, the methods that</p>

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1 you have used are consistent with the
2 merger guidelines, but you're not able to
3 say whether they were sufficient to
4 define those markets based on the merger
5 guidelines?

6 MR. CRAMER: Objection to
7 form.

8 THE WITNESS: I don't -- I
9 just don't know what sufficient
10 means in that context.

11 BY MR. ISAACSON:

12 Q. Okay. And when you say
13 they're consistent with the guidelines,
14 what do you mean?

15 A. I think the guidelines tell
16 us, and I even quote the guidelines when
17 it comes to defining input markets, and
18 I'm faithful to the -- to the teachings
19 and to the standards that are articulated
20 in the guidelines.

21 Q. All right. And the output
22 markets that you define -- well, actually
23 let me break it down.

24 There's three -- two input

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1 markets and one submarket, and there's a
2 geographic market for each of those,
3 correct?

4 A. Correct.

5 Q. And the geographic market
6 for all three would be North America?

7 A. Yes.

8 Q. Okay. And then you define
9 an output market. Is that an output
10 market that's tied to each input market
11 or is there one output market?

12 A. There's one output market,
13 but it does depend on how you have
14 defined the input market. You may recall
15 that when I -- when I chart, for example,
16 the number of events in the relevant
17 output market, it depends on -- I'm
18 making it as a condition that an event --
19 an MMA event had to feature at least one
20 fighter that belonged to the relevant --
21 to the associated relevant input market.

22 You probably recall --

23 Q. Yes.

24 A. Those charts, 4A, B and C.

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1 So -- so the way that I've
2 implemented the output market, it depends
3 on -- on the associated input market.

4 Q. Right. And that's why
5 mathematically I'm trying to understand
6 whether you have three output markets
7 tied -- each one tied to an associated
8 input market or there's one output market
9 tied to the three input markets.

10 A. Again, I like to think of
11 there being one output market and one
12 input market and these are just different
13 ways to measure them.

14 Q. And the -- when you defined
15 the output market, you used revenue
16 weighting; is that right? Oh, no, it's
17 other way around. Never mind.

18 The revenue earned by the
19 output market is the revenue that you use
20 when you do revenue weighting in the
21 input markets, correct?

22 A. It is possible to think of
23 it that way, but when I was finding my
24 weights, my revenue weighting measures

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1 of, say, market share or foreclosure
2 share, I wasn't thinking about the fact
3 that those revenues occur in the output
4 market. But that's fair, if that's how
5 you would like to think about it. Of
6 course the -- the output is the
7 production of the event and the revenue
8 is associated with that output.

9 Q. Right. And can you describe
10 to me a situation where a firm would have
11 monopoly (sic) power in the output market
12 based on revenue, and would not have
13 monopsony power in the input market once
14 you use the revenue weighting?

15 MR. CRAMER: Incomplete
16 hypothetical. Talking about this
17 industry or just generally?

18 MR. ISAACSON: Generally.

19 MR. CRAMER: Incomplete
20 hypothetical.

21 THE WITNESS: I don't
22 understand the question because
23 the revenue weighting isn't really
24 affecting my -- my conclusions

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1 with respect to, say, a finding of
2 monopsony power in the input
3 market.

4 BY MR. ISAACSON:

5 Q. Well, you do have findings
6 of monopsony power that do rely on
7 revenue weighting, right?

8 A. I think that under the --
9 under the indirect approach and under
10 only one pass through the indirect
11 approach, I weight fighters by -- by
12 revenues to make an inference about
13 Zuffa's high shares in that relevant
14 input market.

15 Q. Right.

16 A. But as you know, that's only
17 one of many, many approaches that allow
18 me to get to the conclusion of monopsony
19 power.

20 Q. Okay.

21 A. I actually prefer --

22 Q. So let's return --

23 A. Can I finish?

24 Q. I thought you were.

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1 A. I prefer direct evidence
2 generally, and I think that I've -- I
3 offer a slew of evidence that speaks to
4 how you can prove directly that Zuffa
5 exercises monopsony power.

6 Q. I understand that you
7 offered direct and indirect evidence, but
8 I need to ask about them one at a time
9 and we can cover both.

10 A. Okay.

11 Q. So in terms of when you
12 define a market, can you describe to me a
13 situation where if you use revenue
14 weighting in the input market, where
15 the -- a monopoly firm would not
16 necessarily have a monopoly in the input
17 market?

18 MR. CRAMER: Incomplete
19 hypothetical, form.

20 THE WITNESS: I've never
21 given thought to that, and I'd
22 like to think about it and maybe
23 we'll come back. But I don't
24 think I'm prepared to -- to

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1 construct a scenario about how
2 that could occur.

3 BY MR. ISAACSON:

4 Q. All right. The -- and then
5 you've described geographic market for
6 the output market also. And is that also
7 North America?

8 A. Yes.

9 Q. All right. The -- and in
10 terms of your SSNIP analysis -- all
11 right. So did you do -- well, my
12 colleague wants to know so it seems like
13 a good question.

14 A. I'm sure it is.

15 Q. In the out -- in the output
16 market, what is being sold? In the
17 output markets that you have defined.

18 A. Sure. I think that you
19 are -- the production or the product that
20 is being produced are -- is live MMA
21 events and the revenue associated with
22 those events can take the form of gate
23 revenue or pay-per-view. That's from --
24 from the consumer side. Of course,

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1 there's -- there's revenues from the
2 advertiser's side as well.

3 But I hope that answers your
4 question.

5 Q. All right. And does
6 pay-per-view compete with broadcast?

7 MR. CRAMER: Objection to
8 form.

9 THE WITNESS: I did not
10 conduct that inquiry.

11 BY MR. ISAACSON:

12 Q. Do you have an opinion one
13 way or another about that?

14 A. No.

15 Q. All right. With respect to
16 the -- does -- do the live venue events
17 compete with pay-per-view events?

18 A. I don't even understand the
19 question. Many of the pay-per-view
20 events are live.

21 Q. Meaning I watch it on
22 pay-per-view as opposed to go see it
23 live.

24 A. I haven't -- I haven't

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Please read your deposition over carefully and make any necessary corrections. You should state the reason in the appropriate space on the errata sheet for any corrections that are made.

After doing so, please sign the errata sheet and date it.

You are signing same subject to the changes you have noted on the errata sheet, which will be attached to your deposition.

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ACKNOWLEDGMENT OF DEPONENT

I, _____, do hereby certify that I have read the foregoing pages, 1 - 337, and that the same is a correct transcription of the answers given by me to the questions therein propounded, except for the corrections or changes in form or substance, if any, noted in the attached Errata Sheet.

HAL J. SINGER, Ph.D. DATE

Subscribed and sworn
to before me this

_____ day of _____, 20____.

My commission expires: _____

Notary Public

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ERRATA

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